

the orbital motions are larger near the water surface within the region of $L/2$, where L represents the wavelength of the waves moving near the sea surface. By orienting the panel in a reversed pendulum configuration, i.e., the proximal or hinged end of the panel is toward the seabed and the distal end extends upward toward the sea surface, the invention obtains the following properties:

1. The panel motion corresponds to the water particle motion as the energy traverses, due to positioning the panel (energy absorber) in a reversed pendulum orientation within the natural water particle motion and to also correspond to the natural water particle motion;

- A. The panel is in an orientation to move within and correspond to the water particle motion as the wave energy traverses through the water body (i.e. larger water particle orbital motions near the sea surface and decreasing in orbital motions descending through the depths to the region of $L/2$. This corresponds to larger panel oscillations (i.e. longer arc length path of the panel near the sea surface and decreasing in arc length towards the pivot point (proximal end). Water particle motions have large orbital motions and force near the sea surface, and the orbital motions diminish in orbital size (and force) towards the region of $L/2$. If the panel is within a region where the water depth between the sea surface and the seabed is less than $L/2$ (such as surf zones), panel oscillations are not guaranteed.

- B. The upward extension of the panel places the panel in the $L/2$ region where the wave energy traverses through the water. In this position, the panel is able to maximize energy capture by exposing the panel to the entire energy flux region (more energy can be absorbed by the panel).

2. The reversed pendulum allows for an inherent lever arm design. The lever arm (a) increases the torque in order to produce higher pump pressures, and (b) the lever arm allows flexibility as a means to account for sealevel fluctuations and wave height variations, and to maximize the performance of the device. This may be accomplished by either adjusting the panel along the length of the lever arm within the depth of operation, and/or by manipulating the pump pushrod pivot position along the lever arm.

3. Another important consequence of an inverted panel orientation is that the infrastructure may be fixed to the seabed (while maintaining the advantages stated above). This arrangement places the infrastructure in a region of low wave energy forces, (i.e. the base of the

device is somewhere in the region of $L/2$ or below where the wave forces are smaller, while the panel (energy absorber) is within the $L/2$ region where the wave forces are larger.

In contrast to the invention, the platform in the Axford device is secured to the seabed and extends above the water surface. The Axford panel is not designed as an inverse pendulum with a hinge pivot positioned and a distal end with the panel extending vertically within the region of $L/2$ below the sea surface.

In summary, Claim 1 as amended is now deemed to be patentably distinct over the cited prior art, as well as Claims 2-20 depending therefrom, and it is requested that a Notice of Allowance be issued upon reconsideration.

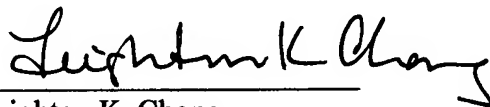
REQUEST FOR EXTENSION OF TIME

Applicant hereby request a one-month extension of time for response to the Examiner's action, i.e., until April 16, 2005. Our check for \$60 for the required extension fee (small entity) is enclosed.

CERTIFICATE OF MAILING:

The undersigned certifies that the foregoing is being mailed on April 15, 2005, by depositing it with the U.S. Postal Service, first class postage paid, addressed to: Mail Stop: Amendment, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

Respectfully submitted,
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